

IN THE CLAIMS:

1-20. (Canceled)

21. (New) A composition for detecting the presence or absence of an aggregation of proteins, the composition comprising a set of electrophoretic probes and a second reagent, the electrophoretic probes and the second reagent being specific for the aggregation, the electrophoretic probes being selected from the group defined by the formula:

$$[(D, M)-L]_k-T$$

wherein:

T is a target-binding moiety specific for the aggregation,

k is an integer in the range of from 1 to 20,

L is a cleavable linkage,

D is a detection group, and

M is a mobility modifier, such that upon cleavage of L an eTag reporter comprising a detection group, D, and a mobility modifier, M, is produced with a unique electrophoretic mobility so that eTag reporters of different electrophoretic probes form distinct peaks upon electrophoretic separation; and

wherein the second reagent of the composition is capable of generating an active species to cleave the cleavable linkage.

22. (New) The composition of claim 21 wherein M is a mobility modifier comprising from 1 to 500 atoms selected from the group consisting of carbon, hydrogen, oxygen, phosphorus, nitrogen, sulfur, and boron.

23. (New) The composition of claim 22 wherein said cleavable linkage is selected from the group consisting of olefins, thioethers, sulfoxides, and selenium analogs of thioethers or sulfoxides, and wherein said active species is selected from the group consisting of singlet oxygen, hydrogen peroxide, NADH, and hydrogen radicals.

24. (New) The composition of claim 23 wherein said detection group is a fluorophore, a chromophore, or an electrochemical label.

25. (New) The composition of claim 23 wherein said target-binding moiety is a monoclonal antibody or a polyclonal antibody, and wherein k is in the range of from 1 to 3.

26. (New) The composition of claim 21 wherein said plurality is in the range of from 5 to 100, and wherein said mobility modifier, M, has a molecular weight in the range of from 30 to 3000 daltons.

27. (New) The composition of claim 26 wherein said cleavable linkage is selected from the group consisting of olefins, thioethers, sulfoxides, and selenium analogs of thioethers or sulfoxides, and wherein said active species is selected from the group consisting of singlet oxygen, hydrogen peroxide, NADH, and hydrogen radicals.

28. (New) The composition of claim 27 wherein said detection group is a fluorophore, a chromophore, or an electrochemical label.

29. (New) The composition of claim 27 wherein said target-binding moiety is a monoclonal antibody or a polyclonal antibody, and wherein k is in the range of from 1 to 3.

30. (New) The composition according to claims 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 wherein said second reagent comprises a sensitizer capable of generating singlet oxygen when photoactivated.